Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A heat exchanger for motor vehicles comprising:

(a) a plurality of flat tubes through which a fluid cooling medium can flow;

(b) elongated vortex generators in the form of indentations pointing inward on at least one flat face of said flat tubes, and

(i) wherein the ratio between a height, h, of the vortex generators and a height, H, of the flat tubes is approximately 0.05 to 0.5;

(ii) wherein a longitudinal axes of the vortex generators are inclined at angles of approximately 10° to 40° with respect to the tube longitudinal axis; and

(iii) wherein vortex generators which are adjacent transversely with respect to the tube longitudinal axis are inclined in opposite directions; and

(iv) wherein the ratio of the distance between the vortex generator rows in the direction of the tube longitudinal axis to the length of the vortex generators is about 1 to 10; and

(v) wherein the ratio of the distance between the first flat face and the second flat face of the vortex generator rows in the direction of the tube longitudinal axis to the height of the vortex generators is approximately 10 to 30

(c) corrugated fins to which environmental air or other media can be applied operably linked to said flat tubes.

2. (Original) The heat exchanger as claimed in claim 1, wherein the ratio between the height, h, of the vortex generators and the height, H, of the flat tubes is approximately 0.05 to 0.25.

3. (Original) The heat exchanger as claimed in claim 1, wherein the ratio between the height, h, of the vortex generators and the height, H, of the flat tubes is approximately 0.25 to 0.5.

D1 4. (Original) The heat exchanger as claimed in claim 1, wherein the vortex generators are arranged in vortex generator rows of at least three vortex generators and wherein said rows run transversely with respect to the tube longitudinal axis and essentially in straight lines.

5. (Previously Presented) The heat exchanger as claimed in claim 1, wherein a plurality of vortex generator rows are arranged one behind the other, in the direction of the tube longitudinal axis.

6 (Cancelled)

7. (Original) The heat exchanger as claimed in claim 1, wherein the ratio of (i) the transverse distance, b, between the vortex generators with respect to (ii) the tube longitudinal axis to the length, L, of the vortex generators is approximately 0.1 to 0.9.

8. (Previously Presented) The heat exchanger as claimed in claim 4, wherein the vortex generators are arranged on both flat faces of the flat tubes.

9 (Cancelled)

10. (Currently Amended) The heat exchanger as claimed in claim 8, wherein the vortex generator rows are arranged offset at an angle, β, of approximately 10° to 30° **with respect to a line transverse to the tube longitudinal axis**.

11. (Original) The heat exchanger as claimed in claim 1, wherein the flat tubes are beaded tubes, with a bead running parallel to the tube longitudinal axis.

12. (Original) The heat exchanger as claimed in claim 1, wherein the height of the vortex generators is 10% to 80% of half the height, H, of the flat tubes.

13 (Cancelled)

14. (Original) An automotive cooling system for an engine, comprising a cooling loop carrying an engine coolant and communicating with the engine, and a heat exchanger in the cooling loop, wherein the heat exchanger comprises a heat exchanger according to claim 1.

15. (Original) A motor vehicle comprising an engine and a cooling system for the engine, wherein the cooling system comprises a cooling system as defined by claim 14.

16. (Previously Presented) The heat exchanger as claimed in claim 8, wherein respective vortex generator rows on the first flat face and on the second flat face are arranged in alternating relationship with respect to one another in the direction of the tube longitudinal axis.

17. (Previously Presented) The heat exchanger as claimed in claim 8, wherein respective vortex generators in at least one row on the first flat face and in the row located at the same longitudinal position on the second flat face are arranged in alternating relationship with respect to one another, in the direction transverse to the tube longitudinal axis.

18. (Presently Presented) The heat exchanger as claimed in claim 16, wherein the vortex generator rows are arranged at an angle, β, of approximately 10° to 30° with respect to a line transverse to the tube longitudinal axis.

19. (Previously Presented) The heat exchanger as claimed in claim 8, wherein the vortex generators in respective rows are arranged essentially in straight lines behind one another in the direction of the tube longitudinal axis.

D1 20. (Previously Presented) The heat exchanger as claimed in claim 18, wherein the vortex generators in respective rows are arranged essentially in straight lines behind one another in the direction of the tube longitudinal axis.

21. (Previously Presented) The heat exchanger as claimed in claim 20, wherein there are an odd number of vortex generators in each respective row.

22. (Previously Presented) The heat exchanger as claimed in claim 5, wherein the distance between adjacent vortex generator rows is 6 mm.

23. (Previously Presented) The heat exchanger as claimed in claim 10, wherein the distance between adjacent vortex generator rows is 6 mm and the angle β is 20°.